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09/918,437		Herfried Lammer	2418.0128-00	4755

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EXAMINER

CHIU, RALEIGH W

ART UNIT	PAPER NUMBER
3711	

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15

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 15

Application Number: 09/918,437  
Filing Date: 01 August 2001  
Appellant(s): LAMMER, HERFRIED

**MAILED**  
**OCT 01 2003**  
**GROUP 3700**

Roland G. McAndrews, # 41,450  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 21 July 2003.

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**(1) Real Party in Interest**

A statement identifying the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) Status of Claims**

The statement of the status of the claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Invention**

The summary of invention contained in the brief is correct.

**(6) Issues**

**(6) Issues**

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

The appellant's statement in the brief that certain claims do not stand or fall together is not agreed with because claim

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10 should stand or fall together with claims 1-5 and 12 because the claim depends from claim 1. Otherwise, claims 6-9 and 13 stand or fall together; claims 11 and 14 should stand or fall together.

**(8) *ClaimsAppealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

5,775,715	VANDERGRIFT	07-1998
5,857,694	LAZARUS et al.	01-1999
	(LAZARUS)	
5,869,189	HAGOOD, IV et al.	02-1999
	(HAGOOD)	

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-14 stand finally rejected under 35 U.S.C. 103 as being unpatentable over Vandergrift in view of Lazarus and Hagood.

Regarding claims 1 and 11, Vandergrift teaches that it is known in the art to use a piezoelectric system as a vibration damping device in skis. Vandergrift fails to disclose its use

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with tennis racquets and does not show a self-powered piezoelectric system.

However, it would have been obvious to one of ordinary skill in the art to employ the Vandergrift system in the frame of a tennis racquet in view of Lazarus who teaches the equivalence of using piezoelectric materials in both skis and tennis racquets for the purposes of vibration damping. See Figures 1a and 10 of Lazarus.

Further, regarding the self-powered system, Hagood teaches that such self-powered piezoelectric systems are old and well-known in the art for their ability to be easily connected to the control electronics even when embedded in a large structural component and their compatibility with standard structural composites without reducing mechanical performance. See Hagood at the bridging paragraph between columns 3-4 and the subsequent text at column 4, lines 17-26. Therefore, it would have been obvious to one of ordinary skill in the art to substitute the Hagood piezoelectric system for the one disclosed by Vandergrift for the reasons set forth above.

Even further, regarding the circuitry within the handle portion and claims 6, 7, 9 and 10, as Lazarus shows the circuitry to be located within the racquet itself and as Hagood clearly shows that the control circuitry can be situated

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anywhere with respect to the transducers, and as applicant has not disclosed that having the circuitry in a specific location solves any stated problem, it would have been an obvious matter design choice to place it in the end cap of the racquet handle. The material displaced from the handle to accommodate the circuitry broadly corresponds to the recited slot; the shape of the actual space is not considered to be critical.

Regarding claims 2-4, Lazarus shows in Figure 10 the desirability of using two piezoelectric elements in the racquet throat area; Figure 1 of Hagood shows a piezoelectric transducer 11 connected to a circuit 22.

Regarding claim 5, Figure 1 of Hagood shows layers 11,12 which can be broadly considered as a protective coating.

Regarding claim 8, Figure 8A of Lazarus discloses the concept of protecting circuitry using foam.

Regarding claims 12-14, Hagood discloses the use of piezoelectric fibers. See column 5, lines 5-34.

#### **(11) Response to Argument**

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231

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USPQ 375 (Fed. Cir. 1986). A reference is to be considered not only for what it expressly states, but for what it would reasonably have suggested to one of ordinary skill in the art.

*In re DeLisle* 160 USPQ 806.

In response to appellant's argument that the rejections ignore the "size and durability requirements associated with connecting a circuit to a racket than a ski", it is noted that the claims set forth no such requirements. Limitations not set forth in the claim language cannot be read into the claims for the purpose of avoiding the prior art. Further, appellant provides no evidence of any size and/or durability limitations; such arguments cannot take the place of evidence. Even further, Figure 10 of Lazarus shows that piezoelectric materials can be located within a racquet handle.

In response to appellant's argument that the claims "are directed to the laminating process by which the at least one transducer elements is affixed to the racket", it is noted that the instant claims are drawn to apparatus claims, not method claims. Moreover, although Hagood does not discuss a laminating process to a racket frame, the rejection of the claims is based on Vandergrift, Lazarus and Hagood. The test of obviousness under 35 USC 103 is not the express suggestion of the claimed invention in any or all of the references but what the

references taken collectively would suggest. *In re Conrad*, 169 USPQ 170.

In response to appellant's argument that the shape of the opening is a factor in the performance of the racket, appellant provides no evidence of the criticality of the shape to overcome the *prima facie* case of obviousness. Regarding the strength and playing characteristics of the racket and given the small cross-sectional areas of a typical tennis racket frame, a racket designer would naturally want to minimize the shape of any opening within the frame to maintain structural integrity. The conclusion of obviousness may be made from common knowledge and common sense of the person of ordinary skill in the art.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,  
  
Raleigh Chiu  
Primary Examiner  
Art Unit 3711

RWC: dei: feif  
September 30, 2003

Conferees



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